

ABSTRACT OF THE DISCLOSURE

Magnet wires wound in slots in a lamination stack of a dynamoelectric machine are encapsulated, in whole or in part, with thermally conductive plastic. Pre-formed features having a thermal conductivity higher than the thermally conductive plastic are insert molded when the plastic is molded. The pre-formed features may include a finned end cap and a fan. Alternatively, end domes of the plastic over end coils of the wound magnet wires have a metallic layer on them, such as by being metallized. The end domes can be formed with features which are also metallized. The thermally conductive plastic can have a phase change additive in it. The magnet wires can have a layer of heat activated adhesive that is activated when the plastic is molded. Slots in the lamination stack can include slot liners formed of thermally conductive plastic. A fan can be formed when the thermally conductive plastic is molded to encapsulate the magnet wires.